

IO25151  
-001

## Spurling, Norman

---

**From:** Miller, Robert  
**Sent:** Thursday, May 09, 2013 9:34 AM  
**To:** Spurling, Norman  
**Subject:** FW: Lab report for domestic goose loss  
**Attachments:** P2693.pdf

See also  
IO25150-003  
p.15

Robert A. Miller  
EIS Database Manager  
Environmental Fate and Effects Division  
Office of Pesticide Programs  
United States - Environmental Protection Agency  
1200 Pennsylvania Avenue, N.W., Washington D.C.  
Mail Code: 7507P  
Phone: (703) 347-8012

---

**From:** McMillin, Stella@Wildlife [<mailto:Stella.McMillin@wildlife.ca.gov>]  
**Sent:** Wednesday, May 08, 2013 12:08 PM  
**To:** [rmulherin@rivcoag.org](mailto:rmulherin@rivcoag.org)  
**Cc:** [kchang@dfg.ca.gov](mailto:kchang@dfg.ca.gov); [jmartin@cdpr.ca.gov](mailto:jmartin@cdpr.ca.gov); [rbireley@cdpr.ca.gov](mailto:rbireley@cdpr.ca.gov); [ddaniels@cdpr.ca.gov](mailto:ddaniels@cdpr.ca.gov); Miller, Robert  
**Subject:** Lab report for domestic goose loss

Hello,

Attached please find a lab report for a loss of domestic geese in Riverside County in March 2013. If you need a hardcopy or have any questions, please let me know.

Thanks.  
Stella

Stella McMillin  
Staff Environmental Scientist  
California Department of Fish and Wildlife  
Wildlife Investigations Laboratory  
1701 Nimbus Road  
Rancho Cordova, CA 95670  
Office 916-358-2954  
Cell 916-531-9683



**DEPARTMENT OF FISH AND WILDLIFE  
WILDLIFE BRANCH  
WILDLIFE INVESTIGATIONS LABORATORY  
PESTICIDE INVESTIGATIONS  
1701 NIMBUS ROAD  
RANCHO CORDOVA, CA 95670  
PHONE (916) 358-2954**

**Lab Number** P-2693  
**CAHFS No.** D1304044

**Date of loss:** 3/23/13  
**Sample:** Domestic geese (2)  
**Listing status:** No special status

**Report Date:** May 8, 2013

**To:** Robert Mulherin,  
Riverside County Agricultural Commissioner's Office

**Remarks**

Pesticide investigation in domestic geese from Wildomar in Riverside County.

**Background**

On March 23, 2013, DFW Southern District Enforcement staff received a report of several domestic geese dying from seizures around a pond in a housing development called The Farm in Wildomar in Riverside County. Enforcement staff collected two goose carcasses and shipped them to DFW Wildlife Investigations Laboratory to determine cause of death. No suspicious material was found near the pond.

---

**RESULTS OF EXAMINATION**

---

The two carcasses were submitted to the California Animal Health and Food Safety Laboratory (CAHFS) for full necropsy. Both geese were in good nutritional condition and tested negative for botulism, Salmonella, Avian Influenza, and West Nile Virus. Brain cholinesterase activity (which may indicate exposure to organophosphates or carbamates) was normal. Stomach contents of both geese contained both strychnine and zinc phosphide.

Both strychnine and zinc phosphide are rodenticides. Strychnine is only legally applied underground for pocket gopher control. Strychnine is a neural toxicant. Clinical signs of poisoning include anxiety, stiffness, and violent seizures. Strychnine is very highly toxic to birds with LC50 values of 2-5 ppm (mallards). Zinc phosphide is converted to toxic phosphine gas in the digestive tract which causes respiratory distress and asphyxiation. Death occurs within 24 hours for birds. Zinc phosphide is highly toxic to birds with an LD50 of 67 ppm (mallards).

The cause of death of both geese was determined to be strychnine with zinc phosphide as a likely contributing factor.

**WILDLIFE INVESTIGATIONS LABORATORY**

*Stella McMillin*

**Stella McMillin, Staff Environmental Scientist  
Wildlife Investigations Laboratory**

**Approved**

*Steve C. Torres*

**Steve Torres, Program Manager,  
Wildlife Investigations Laboratory**

**Cc: Warden Kyle Chang,  
DFW Southern Enforcement District**

**Jeanne Martin,  
DPR Enforcement**

**Rich Bireley,  
DPR Registration**

**Dr. Debbie Daniels,  
DPR Registration**

**Robert Miller,  
USEPA**